

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

CLEANUP AND ABATEMENT ORDER NO. 98-004

REQUIRING ANADITE, INC.
TO CLEANUP AND ABATE
CONDITIONS OF SOIL AND GROUND WATER POLLUTION
CAUSED BY THE RELEASE OF HAZARDOUS SUBSTANCES

(File No. 97-019)

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. Anadite, Inc. (hereinafter called discharger), is a Nevada corporation and a wholly owned subsidiary of Brierley Investments (Far East Holdings) Limited, (BIL) a Hong Kong corporation. Anadite's South Gate facility is located at 10647 Garfield Avenue in South Gate, Los Angeles County, California. The site occupies approximately 3.8 acres in an industrial area. The site consists of two separate parcels namely the main site area and the storage lot. The main site area is approximately 3.4 acres and is bordered on the north by a residential building, on the south by Meadow Road, and on the east by Garfield Avenue. The storage lot is located on the west side of Sessler Street, southwest of the main site area. The storage lot occupies approximately 0.4 acre and is bordered on the north by Sessler Glass Recycling, on the west by Union Pacific Railroad tracks, on the south by a former metal storage building, and on the east by Sessler Street.

The main site area consists of a plating building, a paint shop building, a main office building, a maintenance building, a vacuum coating building and paved areas. The storage lot consists of a chemical storage area, a waste drum storage area, an equipment storage area, and an empty drum storage area. The storage areas are paved and bermed, however the remainder of the storage lot is unpaved and each site parcel is fenced.

2. Information regarding activities at the site before 1952 was not available. In 1952, Discharger began operations on both site parcels. Between 1952 and 1987 the company was publicly held. In 1987, discharger was acquired by BIL. Following the BIL acquisition, all former Anadite senior corporate management retired or were terminated and completely new management was installed to oversee the operation of Anadite.

Since 1952, the discharger has operated as a metal plating and finishing facility that serves the aerospace industry. Plating and anodizing operations are conducted in the onsite plating building in an area known as the Big Line Tank. This area contains 16 aboveground, open-top tanks ranging in capacity from 2,200 gallons to 16,650 gallons. In general, the anodizing and plating operations involve placing materials into the Big Line tanks, which contain acidic or metallic solutions. In addition, chemical milling, photo-etching, and painting are or were conducted on site. Chemical milling involves the formation of solutions from dry or liquid stock chemicals. The photo-etching process, which was discontinued in 1994, used a xylene/naphtha thinner developing tank and a

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nitric/hydrofluoric acid etch tank. Paint application is conducted in three dry-filter paint booths in the on-site paint shop building. Discharger also conducted cadmium coating in the vacuum cadmium building. This process includes vaporizing cadmium in a vacuum chamber and drawing the vapor to the material to be coated. Discharger discontinued cadmium coating operations in October 1994. Hazardous substances used on-site consist of several metals, including cadmium, chromium, and nickel, as well as acids, caustics, and solvents.

3. According to the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), hazardous waste manifest database, the following wastes were generated by discharger between 1990 and 1993: alkaline solutions with metals, solutions containing metals and/or solvents, sludges containing metals and/or solvents, and paint sludge. During 1990, approximately 160,000 pounds of hazardous waste, including metal sludge and inorganic solid wastes, were generated at the site and transported to landfills for disposal. This waste consisted primarily of sludge produced during the cleaning of parts prior to plating. In the same year, discharger generated approximately 75,000 pounds of alkaline solution containing metals and transported it to various treatment, storage, and disposal facilities (TSDFs) for treatment and disposal. These liquids were generally derived from process tanks that were no longer functional because of contamination and/or chemical buildup in the chemical bath. Also in 1990, discharger generated approximately 114,000 pounds of unspecified liquid wastes and transported them to various TSDFs for treatment and disposal. Most of these liquids were derived from process tank contamination and tank content replacement. Prior to transporting off site, the wastes were stored in 55-gallon drums in the storage lot. Currently, 55-gallon drums are stored in a 600-square-foot, paved, and bermed area in the storage lot.

An on-site wastewater treatment system is located in the plating building. The system is used to treat process effluent wastes generated from metal-plating activities. The treatment system also collects liquids that overflow from tanks within the entire site. The process effluent waste generally contains alkaline and acid liquids with metals. The wastewater treatment system treats only 5 to 10 percent of the liquid waste generated on site, and the remainder is sent off site for disposal. Subsequent to treatment, the effluent is sampled and analyzed by discharger at an onsite laboratory in the main office building. Following analysis, the effluent is discharged into the publicly owned treatment works (POTW). Discharger holds a permit issued by the Los Angeles County Sanitation District to discharge the process effluent to the POTW.

4. The Anadite site was entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database on May 14, 1993. On September 28, 1993, a RCRA Compliance Evaluation Inspection was conducted by the EPA, Region IX. Several potential violations were noted in the hazardous waste storage area. Storage of incompatible substances was documented, as were open-top drums of hazardous wastes and improper drum labeling. Some evidence of minor spills was also documented. In a letter to the Los Angeles County Department of Public Works (DPW) dated February 16, 1994, the EPA considered the site a "high priority" and referred it to the DPW for follow-up. The site is listed in the Resource Conservation and Recovery

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Information System (RCRIS) database, as of November 22, 1994, as a large-quantity hazardous waste generator.

The Anadite South Gate facility has until recently experienced operating losses as a result of depressed economic conditions affecting its principal customers in the aerospace industry. The combined effects of business conditions and potential environmental liabilities associated with the facility had been a material impediment to the sale of the facility. Delays in addressing the environmental issues has resulted from discharger's deteriorating financial position and limited resources.

5. In July 1991, ICG Hydrotech, Inc., a consultant to Anadite, Inc., conducted a subsurface soil investigation at the Anadite site. The investigation was conducted in response to a requirement by the DPW to determine whether hazardous substances were present in subsurface soils adjacent to, and beneath the Big Line Tank area. Six soil borings (four slant-drilled and two vertical) were drilled and 36 soil samples were collected at 5, 10, 15, 20, 30, and 40 feet bgs in the Big Line Tank area. The soil samples were analyzed for VOCs using EPA Method 8010, and for 17 metals using California Code of Regulations (CCR) Title 22 methods. In addition, soil samples in which hexavalent chromium was detected were also analyzed for soluble hexavalent chromium using CCR Title 22 methods. Analytical results indicated that TCE and PCE were detected at maximum concentrations of 0.738 milligrams per kilogram (mg/kg) (40 feet bgs) and 3.73 mg/kg (30 feet bgs), respectively. Total chromium and hexavalent chromium were detected at maximum concentrations of 2,150 mg/kg (10 feet bgs) and 257 mg/kg (30 feet bgs), respectively. Soluble hexavalent chromium was detected at concentrations up to 24 milligrams per liter (mg/l) at 30 feet bgs.

In June 1994, Camp Dresser & McKee, Inc. (CDM) conducted a subsurface investigation at the Anadite site. The investigation was conducted in response to a requirement by the DPW to determine whether hazardous substances were present in groundwater beneath the site. As part of the investigation, soil samples were collected from soil borings at 5-foot intervals, and screened in the field for VOC concentrations. Soil sample headspace screening for total VOC concentrations was conducted. Total VOC concentrations were detected up to 76.6 parts per million (ppm) in a sample collected from boring MW-3 at 40 feet bgs. One soil sample was collected from soil boring MW-3 at 40 feet bgs and analyzed by a laboratory for VOCs using EPA Method 8240/8260. Results of the analysis indicated that PCE was detected at a concentration of 20 µg/kg.

6. As part of the June 1994 CDM investigation, three groundwater monitoring wells were installed on site. Monitoring well MW-1 was installed adjacent to the northern site boundary, hydraulically upgradient of on-site buildings; MW-2 was installed adjacent to the southern site boundary, hydraulically downgradient of on-site sources; and MW-3 was installed south and hydraulically downgradient of the Big Line Tank area. The wells were installed to approximately 60 feet bgs and the screened intervals are between 35 feet and 60 feet. All three wells were sampled and analyzed for total chromium and hexavalent

chromium. Total chromium and hexavalent chromium were detected in a sample collected from MW-2 at concentrations of 66 mg/l and 56 mg/l, respectively. Total chromium and hexavalent chromium were not detected above the detection limits (0.0087 mg/l and 0.10 mg/l, respectively) in MW-1. Groundwater samples collected from MW-3 were analyzed for total and hexavalent chromium and for VOCs. Analytical results indicated that total chromium and hexavalent chromium, TCE, PCE, and 1,2-DCE were detected at concentrations of 3,100 µg/l, 3,400 µg/l, 1,200 µg/l, 6,400 µg/l, and 21 µg/l, respectively. On February 1, 1996, this project was formally transferred to Los Angeles Regional Water Quality Control Board by County DPW.

7. The site is located in the Central Groundwater Basin in an area identified as the Central Basin Pressure Area. With the exception of the uppermost aquifer, known as the Semiperched Aquifer, groundwater in the Central Basin Pressure Area is generally confined. In most parts of the Central Basin Pressure Area, confined aquifers are separated by fine-grained aquicludes. These aquicludes are of varying lateral extent and composition and are absent in some areas where aquifers merge. Aquifers in the Central Basin Pressure Area are divided into upper group aquifers and lower group aquifers. The upper group aquifers are within the Recent Alluvium and Lakewood formations and the lower group aquifers are within the San Pedro Formation.

Hydrogeologically, a series of nine aquifers have been identified in the vicinity of the site. The Recent Alluvium is divided into the Semiperched Aquifer, the Bellflower Aquiclude, and the Gasper Aquifer. The Lakewood Formation consists of (from upper to lower units) the Exposition Aquifer, an unnamed aquiclude, and the Gage Aquifer. The San Pedro Formation consists of five aquifers: the Jefferson, the Hollydale, the Lynwood, the Silverado, and the Sunnyside. Unnamed aquicludes separate the aquifers. The first aquifer encountered beneath the site appears to be the Semiperched Aquifer, which is encountered at 42 feet bgs. Composed of coarse gravel, coarse to fine sand, silt, and clay, the Exposition Aquifer occurs between 70 feet to 125 feet bgs. In the vicinity of the site, the Exposition Aquifer ranges from 30 feet to 110 feet thick. The Gage Aquifer occurs between 180 feet bgs and 265 feet bgs in the vicinity of the site. The Lynwood Aquifer first occurs in the vicinity of the site between 475 feet bgs and 525 feet bgs. The Silverado Aquifer occurs between 580 feet bgs and 600 feet bgs. The Lynwood and Silverado aquifers are important sources of groundwater in the region. Aquifer interconnection appears to exist within 2 miles of the site because of the presence of TCE and/or PCE detected in five municipal drinking-water wells within 1 mile of the Anadite site. These municipal drinking-water wells are screened in various aquifers, including the Exposition, the Lynwood, and the Silverado aquifers. Groundwater flow in the Semiperched Aquifer is to the south. Groundwater flow in the upper group aquifers is to the north-northwest.

8. The site is approximately 2,000 feet east of the confluence of the Los Angeles and Rio Hondo rivers. Surface water runoff from the site flows to the south and west into a storm drain on Sessler Street. The storm drain discharges into the Los Angeles River.

9. The Board adopted a revised Water Quality Control Plan for Los Angeles River Basin on June 13, 1994. The Plan contains water quality objectives for ground water in Central Basin, Coastal Plain Subunit.
10. Ground water in the Coastal Plain is beneficially used for municipal and domestic supply, agricultural supply, and industrial service and process supply.
11. This project involves an action taken for the protection of the environment and, as such, is exempt from the provisions of the California Environmental Quality Act in accordance with California Code of Regulations, Title 14, Chapter 3, Section 15321.

IT IS HEREBY ORDERED, pursuant to Water Code Section 13304, that Anadite, Inc. shall comply with the following:

1. Discharger shall evaluate the adequacy of its previous subsurface investigation, and based on this evaluation, prepare a subsurface investigation workplan in order to complete any necessary site assessment to fully define the nature and extent of the hexavalent chromium contamination beneath the older, eastern portion of the site. Also, to define the associated groundwater hexavalent chromium contamination plume migrating off-site to the south of the facility. Specifically, the discharger shall define the lateral and vertical extent of soil and groundwater contamination at the site. An evaluation report and subsurface investigation workplan shall be submitted to this Board for Executive Officer's approval according to the schedule in Attachment A.
2. Discharger shall evaluate its existing source elimination program. An evaluation report shall be submitted to this Regional Board according to the schedule in Attachment A.
3. Discharger shall cleanup and abate the on-site and off-site soil and groundwater contamination originating from its facility in accordance with the time schedule detailed in Attachment A.
4. Discharger shall review currently available technologies and develop a remediation workplan for soil and groundwater contamination. This workplan is due to this Regional Board according to the schedule in Attachment A.
5. Quarterly progress reports detailing all activities implemented and results obtained during the previous three-month period, as required by this Cleanup and Abatement Order, shall be submitted to this Board.
6. Discharger shall develop and submit for approval a plan for periodic groundwater monitoring according to the schedule in Attachment A. The plan shall include the groundwater sampling analysis results from the existing monitoring wells and a time schedule for submittal of groundwater monitoring reports.

7. If contamination is found to be present in the deeper aquifers from operations at this site, a proposal and time schedule to remediate any such contamination in the deeper aquifer shall be prepared for the Executive Officer's approval. The proposal shall be submitted to this Board within sixty days after the contamination of the deeper aquifer is confirmed.
8. The investigation and cleanup program shall be directed and conducted by a registered civil engineer or geologist or a certified engineering geologist.
9. This Order is not intended to stop or redirect any investigation or cleanup or remediation programs ordered by this Board or any other agency.
10. The Executive Officer is authorized to take appropriate action as provided for in Sections 13268 and 13350 of the Water Code against discharger for any noncompliance with this Order including assessment of penalties in the amount of up to \$5000.00 per day for each day on which any technical data requested by this Cleanup and Abatement Order is not submitted past its due date.
11. This Order in no way limits the authority of the Board as contained in the California Water Code, to require additional investigation and cleanup pertinent to this project. This Order may be revised by the Executive Officer as additional information on this project becomes available. Upon request by discharger, and for good cause shown, the Executive Officer may delete or extend the date of compliance for any action required of discharger under this Order.
12. Unless otherwise approved by the Executive Officer, failure to comply with the terms or conditions of this Order may result in imposition of civil liabilities either administratively by the Regional Board or judicially by the Superior Court in accordance with Section 13350, et. seq. of the California Water Code, and/or referral to the Attorney General of the State of California for such legal action as he or she may deem appropriate.
13. Section 13304 of the Porter-Cologne water Quality Act allows the Regional Board to recover reasonable expenses from responsible parties to oversee cleanup and abatement of unregulated discharges which have adversely affected waters of the State.

Hereby ordered on January 27, 1998.

DENNIS A. DICKERSON
Executive Officer

ATTACHMENT A
CLEANUP AND ABATEMENT SCHEDULE

Activities	Date
GROUNDWATER MONITORING PLAN	May 15, 1998
SITE ASSESSMENT EVALUATION REPORT	May 15, 1998
SOURCE ELIMINATION REPORT	May 15, 1998
SUBMIT REMEDIAL ACTION PLAN	August 31, 1998
IMPLEMENT REMEDIAL ACTION PLAN	30 days after plan is approved by Executive Officer
EVALUATE WHETHER FURTHER CLEANUP OR ABATEMENT IS REQUIRED BASED ON EXISTING REGULATORY GUIDELINES AND SUBMIT FOR APPROVAL	To be determined